

Explorer Series - EP20C/ CK/ CQ/ CKQ



All Weather Outdoor Multi-tech Smart Reader

- Designed for Advanced Security
- Supports Over 100 RFID Credential Types
- Touch Keypad / QR Code Scanner



EP20C



EP20CK



EP20CQ



EP20CKQ

Compact RFID Reader with Touch Keypad



The EP20 reader series is one of the most compact multi-tech RFID readers in the market, which supports over 100 RFID card types and both mobile NFC and Bluetooth (Low Energy) and is suited for most installation environments. Embedded touch keypad enables passwords as an authentication option for users to best suit their needs.

Multi-tech RFID & Mobile Credential



Supports over 100 RFID card types in standard package with varies optional RFID modules that cover up to over 10 extra advanced secured RFID protocols, which almost cover most of the end-user requests, enabling high flexibility for multi-card types and mobile credentials situation.

Designed for Advanced Security



Secure communication: OSDP (v2.2 Secure Channel) over RS-485 communication between EP20 series readers and control panels. Complies with AES-128 standards to prevent against interleaving and replay attacks. Complies with AES256 encryption standards between mobile (NFC (Andriod OS Only)/ Bluetooth) and reader communication.

Secured Data Storage: Certified EAL6+ encryption chips to enhance data protection performance to the finical grading security level.



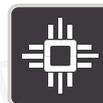
IP68 Water & Dustproof Protection Level

Certified IP68 Water & Dustproof levels represent that the readers can withstand dust, dirt and sand, and are resistant to submersion up to a maximum depth of 3.3ft/ 1.5m underwater for up to thirty minutes.



Up to IK10 Physical & Environmental Protection

Certified IK07 to IK10 Vandal-proof rating enables protection from multiple attacks up to 20 joules



Anti-SPA/ DPA/ EMA/ DEMA Attack

Effectively prevents external malicious attacks and protect all communication and client's data.



Safety Standard of UL746C (F1) and Housing Material Meets UL94-V0 Standard

Ability to work in both indoor & outdoor environments. Resistant to UV degradation. UL 94V-0 standard ensures burning combustion is not sustained for more than 10 seconds after applying controlled flame.



Advanced Security

The Armatura design team is dedicated to ensuring the Explorer Series reaches the highest security expectations.

Explorer Series readers support 4 mobile identification modes when used with the Armatura ID mobile app.



Card Mode

Present your smartphone to the reader like an access card



Remote Mode

Verify on the reader by clicking a button in the Armatura ID app



QR Code Mode

Present your QR Code and get access



Express Mode

Activated and paired up with reader for fully automated door access

COMING SOON

Key Features

Mobile Credential Capability

The Armatura ID mobile app offers a consistent user experience across iOS & Android platforms. Opening doors by presenting your smartphone to the reader or scanning a QR code. Use your phone's Face & TouchID functions for even more secure authentication. It supports both NFC (Android OS Only) and Bluetooth communication methods, extending mobile access functions to almost all smartphone users.



Ultimate Protection (IP68 & IK10 & UL94-V0)

IK10 Vandal-proof and IP68 Water & Dustproof protection levels enable operation under any installation environment. IK10 vandal-proof protection level enhances protection ability against malicious physical attacks. -30°C to 70°C / -22°F - 158°F operating temperature enables operation under extreme weather conditions. UL 94V-0 standards for flammability ensures burning combustion is not sustained for more than 10 seconds after applying a controlled flame.



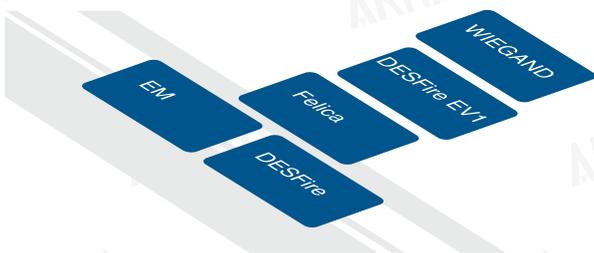
Enhanced Cybersecurity

Open Supervised Device Protocol (OSDP) supports communication between control panel and reader. Guarantees advanced data protection using certified crypto chips with EAL6+ certified. Supports AES128 end-to-end encryption between control panel and reader, ensuring all communications are under secure.



Supports Multi-tech Reading

Supports 125 kHz, 13.56 MHz and 2.4GHz frequency credentials. Supports 100+ card types, covering most of the common card formats in the market.



Compact Design with Touch Keypad & QR Code Scanner as options

Compatible with single gang, European and Asian style boxes suit most interior designs. Optional touch keypad for password authentication. QR code scanner for static/dynamic QR code recognition.

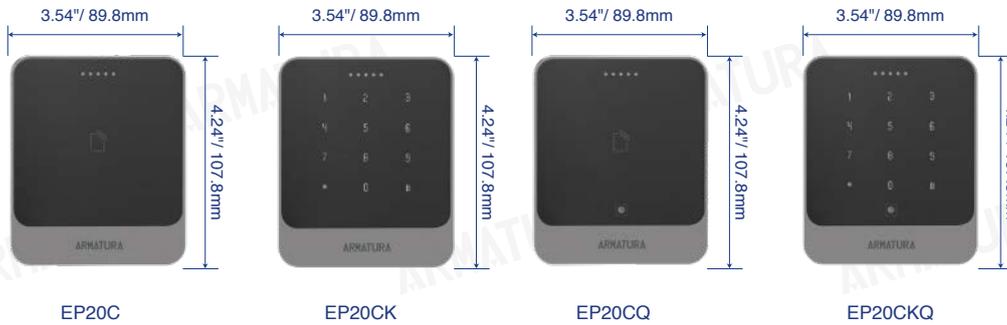


Mobile Credential in Apple Wallet Solution

Armatura EP20CKQ offers support for all HID Mobile Access® solutions including employee badge in Apple Wallet.



Dimensions



Specifications

| Internal Number | EP20C | EP20CK | EP20CQ | EP20CKQ |
|---------------------------------|--|--------------|---|--|
| Operating Frequency / Standards | 125 kHz 13.56 MHz: ISO14443 types A & B, ISO15693 2.4 GHz Bluetooth® | | | |
| Functions | RFID, Bluetooth® | | RFID, Bluetooth® and QR code | |
| Keypad | N/A | Touch Keypad | N/A | Touch Keypad |
| QR Code Scanner | N/A | | Supported | |
| QR Code Scanning Pattern | N/A | | Area image (648*488 pixel array) | |
| QR Code Scan Angle | N/A | | Horizontal: 66°/ Vertical: 50° | |
| QR Code Scanning Print Contrast | N/A | | Print Contrast: 25% minimum reflectance difference Rotation, Pitch, Skew: 360°, +/-40°, +/-60° | |
| QR Code Capability | <p>One-Dimensional Code:</p> <p>UPC-A, UPC-E, UPC-E1, EAN-8, EAN-13, EAN-14, EAN-128, UCC128, ISBN/ISSN, CODE11, CODE32, CODE39, CODE39 Full ASCII, CODE93, CODE128, Interleaved 2 of 5 code, Industrial 2 of 5 code, Matrix 2 of 5 code, Toshiba code, UK/Plessey, GS1</p> <p>Two-Dimensional Code:</p> <p>QR code, PDF417, Data matrix, MicroPDF417, Aztec</p> | | | |
| QR Code Scanning Performance* | N/A | | <p>Narrow Width</p> <p>6.0 mil (Code128)</p> <p>9.0 mil (Code128)</p> <p>15.0 mil (Code128)</p> <p>20.0 mil (Code128)</p> <p>6.0 mil (QR)</p> <p>9.0 mil (QR)</p> <p>15.0 mil (QR)</p> <p>20.0 mil (QR)</p> | <p>Depth of Field</p> <p>2.0"-3.1" (5cm-8cm)</p> <p>2.0"-4.7" (5cm-12cm)</p> <p>2.3"-7.7" (6cm-19.5cm)</p> <p>2.3"-9.8" (6cm-25cm)</p> <p>2.0"-2.3" (5cm-6cm)</p> <p>2.0"-3.5" (5cm-9cm)</p> <p>2.0"-6.3" (5cm-16cm)</p> <p>2.3"-7.9" (6cm-20cm)</p> |

| Internal Number | EP20C | EP20CK | EP20CQ | EP20CKQ |
|-----------------------------------|---|---|---|---|
| Communications & Panel Connection | Wiegand OSDP (v2.2) via RS-485 (Up to 128bits SCP Secure Communication) | | | |
| Reading Distance | 13.56MHz & 125kHz: Up to 2.3"/60 mm (depending on environment and transponder) Up to 393.7"/ 10m with a Bluetooth Smartphone (configurable distances on each reader) | | | |
| Data Protection | AES128 (Secured Communication between Reader & Controller) Secure Data Storage in EAL6+ Certified Crypto Chip | | | |
| Visual Indicator | RGB LEDs (Configurable By 'Armatura Connect' Mobile APP) | | | |
| Audio Indicator | Internal buzzer with adjustable intensity (Configurable By 'Armatura Connect' Mobile APP) | | | |
| Power Requirement / Power Supply | 9 VDC to 24 VDC (Below 0 degrees, the reader needs separate power supply. Above 0 degrees, a single reader requires a minimum of 2.4W power. Below 0 degrees, a single reader requires a minimum of 8W power) | | | |
| Operating Temperature | -22°F - 158°F /-30°C to 70°C | | | |
| Dimensions | 3.54"W x 4.24"H x 0.86"D (89.8 x 107.8 x 21.9mm) | | | |
| Tamper Switch | Magnetic tamper detection system | | | |
| Certifications | CE, FCC, RoHs3.0, WEEE, UL294, IEC EN/ BS EN 60839 Grade 4 | | | |
| Mounting | Suited for Asian / European / single-gang installations or any flat surface mounting | | | |
| Protection / Resistance | Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK10 certified | Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK07 certified | Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK07 certified | Weather & Dust Proof Protection Rating compliant with IP68 Reinforced Vandal-proof Structure IK07 certified |
| UV Stability | Nil structural degradation for the life of the reader in 3 years | | | |
| Housing Material | Polycarbonate UL94-V0 & UL746C (F1) | | | |

Remarks:

**Standard version provides "Read only" function. Customization is required for "Read & Write" function.

*This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)

QR scanning performance was resulted in a laboratory testing environment, the luminance was recorded as 250 Lux

Power Requirement / Power Supply
9 VDC to 24 VDC (Below 0 degrees, the reader needs separate power supply.
Above 0 degrees, a single reader requires a minimum of 2.4W power.
Below 0 degrees, a single reader requires a minimum of 8W power)

| Frequency | Classification | Card Module Abbreviation | [DF] | [MDF] | [SFMH] | [SFM] | [NO] | [NI] | [RNP] | [RNI] | [RNPB] | [RNIB] | [RNOB] | |
|--------------------------|-------------------------------------|----------------------------------|---|---------------------------------|---|--|---------|----------------------------------|---|--|-----------------------------|-----------------------------|-----------------------------|------|
| | | Compatible Readers | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP30CF | VG10CKQ-A/ VG10CKQ-P/ Griffin20 | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP20ENC / EP30CF | VG10CKQ/ VG10CKQ-P/ EP20ENC(Coming Soon) | EP20ENC | EP20ENC/ EP20CQ/ EP20CKQ/ EP30CF | VG10CKQ/ VG10CKQ-P/ EP20CQ/ EP20CKQ/ EP30CF | VG10CKQ/ VG10CKQ-P/ EP20CQ/ EP20CKQ/ EP30CF/ Griffin20 | OmniAC20/ OmniAC30/ FT10CMQ | OmniAC20/ OmniAC30/ FT10CMQ | OmniAC20/ OmniAC30/ FT10CMQ | |
| 13.56MHz | ISO14443A | LEGIC Advant | | | √22) | √22) | √1) | √1) | √1) | √1) | √1) | √1) | √1) | |
| | | MIFARE Classic, Mini S50,S70,S50 | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Classic EV1 | √1) | | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE DESFire Light | | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE DESFire EV1 | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE DESFire EV2/ EV3 | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Plus S, X | | | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Pro X | | | | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Smart MX | | | | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Ultralight | | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Ultralight C | | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | MIFARE Ultralight EV1 | | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | NFC (NTAG2xx) | | | | | √1) | √1) | √1) | √1) | √4) | √4) | √4) | √4) |
| | | PayPass | | | | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | SLE44R35 | | | | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | SLE66Rxx (my-d move) | | | | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | Topaz | | | | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | HID iCLASS SEOS | | | | | | √20) | √20) | √20) | √20) | √20) | √20) | √20) |
| | NFC(HCE Mode,works with Armatra ID) | | | | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| | ISO14443B | Calypso | | | | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | Calypso Innovatron protocol | | | | √1) | √1) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | CEPAS | | | √21) | √21) | √21) | √21) | √21) | √4) | √4) | √4) | √4) | √4) |
| | | HID iCLASS | | | | √1) | √1) | √1) | √20) | √4) | √4) | √4) | √4) | √4) |
| | | CTS | | | | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | Moneo | | | | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) |
| | | Pico Pass | | | | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) | √4) |
| | | SR14K, SR1X4K | | | | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | SRI512, SRT512 | | | | √ | √ | √ | √ | √ | √ | √ | √ | √ |
| | | ISO18092/ ECMA-340 | Sony FeliCa | | √1) | √5) | √5) | √5) | √5) | √1) | √1) | √1) | √1) | √1) |
| | ISO15693 | EM4x33 | | | | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) |
| | | EM4x35 | | | | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) |
| | | HID iCLASS | | | | √1) | √1) | √1) | √10) | √1) | √10) | √1) | √10) | √1) |
| | | HID iCLASS SE/ SR/ Elite | | | | √1) | √1) | √1) | √10) | √1) | √10) | √1) | √10) | √1) |
| iCODE SLI | | | | | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| LEGIC Advant | | | | | √22) | √22) | √1) | √1) | √1) | √1) | √1) | √1) | √1) | |
| M24LR16/64 | | | | | | | √ | √ | √ | √ | √ | √ | √ | |
| MB89R118/119 | | | | | | | √ | √ | √ | √ | √ | √ | √ | |
| SRF55Vxx (my-d vicinity) | | | | | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) | √3) | |
| Tag-it | | | | | √ | √ | √ | √ | √ | √ | √ | √ | √ | |
| Pico Pass | | | | | | | √4) | √4) | √4) | √4) | √4) | √4) | √4) | |
| LEGIC Prime | | | | | √22) | √22) | | | | | | | | |
| CPU Card | | | | | | | | | | | | | | |

ARMATURA

ARMATURA RFID Card Module Supporting List

ArmaSec-01222026

| Frequency | Classification | Card Module Abbreviation | [DF] | [MDF] | [SFMH] | [SFM] | [NO] | [NI] | [RNP] | [RNI] | [RNPB] | [RNIB] | [RNOB] |
|-----------|---------------------|---|---|---------------------------------------|---|---|---------|-------------------------------------|---|--|--------------------------------|--------------------------------|--------------------------------|
| | | Compatible Readers | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP30CF | VG10CKQ-A/ VG10CKQ-P/ Griffin20 | EP10C/ EP20C/ EP20CK/ EP20CQ/ EP20CKQ/ EP20ENC / EP30CF | VG10CKQ/ VG10CKQ-P/ EP20ENC(Coming Soon) | EP20ENC | EP20ENC/ EP20CQ/ EP20CKQ/ EP30CF | VG10CKQ/ VG10CKQ-P/ EP20CQ/ EP20CKQ/ EP30CF | VG10CKQ/ VG10CKQ-P/ EP20CQ/ EP20CKQ/ EP30CF/ Griffin20 | OmniAC20/ OmniAC30/ FT10CMQ | OmniAC20/ OmniAC30/ FT10CMQ | OmniAC20/ OmniAC30/ FT10CMQ |
| 125kHz | | AWID | | | | | √ | √ | | | | | |
| | | Cardax | | | | | √ | √ | | | | | |
| | | CASI-RUSCO | | | | | √ | √ | √ | √ | √ | √ | √ |
| | | Cotag | | | | | | | | | | | |
| | | Deister | | | | | √6) | √6) | | | | | |
| | | EM4100, 4102, 4200 | √1) | √1) | | √1) | √7) | √7) | √ | √ | √ | √ | √ |
| | | EM4050, 4150, 4450, 4550 | | | | | √ | √ | | | | | |
| | | EM4305 | | | | | √14) | √14) | | | | | |
| | | FDX-B, EM4105 | | | | | √15) | √15) | | | | | |
| | | Ultra Prox | | | | | √15) | √15) | | | | | |
| | | G-Prox | | | | | | | | | | | |
| | | HID DuoProx II (1336) | | | | | | | √ | √ | √ | √ | √ |
| | | HID ISO Prox II (1386) | | | | | | | √ | √ | √ | √ | √ |
| | | HID Micro Prox II (1391) | | | | | | | √ | √ | √ | √ | √ |
| | | HID Prox III (1346) | | | | | | | √ | √ | √ | √ | √ |
| | | HID Prox | | | | | | | √ | √ | √ | √ | √ |
| | | HID Prox II (1326) | | | | | | | √ | √ | √ | √ | √ |
| | | HITAG 1, 2, S | | | | | | √9) | √9) | | | | |
| | | ICT | | | | | | √8) | √8) | | | | |
| | | IDTECK | | | | | | √ | √ | | | | |
| | | Indala | | | | | | | | | | | |
| | | ioProx | | | | | | | | | | | |
| | | ISONAS | | | | | | √ | √ | | | | |
| | | Keri | | | | | | √ | √ | | | | |
| | | Miro | | | | | | √ | √ | | | | |
| | | Nedap | | | | | | √6) | √6) | | | | |
| | Nexwatch | | | | | | | | | | | | |
| | PAC | | | | | | √8) | √8) | | | | | |
| | Pyramid | | | | | | √ | √ | | | | | |
| | Q5 | | | | | | √ | √ | | | | | |
| | T5557, T5567, T5577 | | | | | | √ | √ | | | | | |
| | TITAN (EM4050) | | | | | | √ | √ | | | | | |
| | UNIQUE | | | | | | √ | √ | | | | | |
| | ZODIAC | | | | | | √ | √ | | | | | |
| BLE | | Apple Wallet & Google Wallet | | | | | | | | Y | | Y | |
| | Availability | Globally Available | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| | Remark | √) UID only, customization upon request for reading encryption content 1) UID only 2) Read/ write (customisation) enhanced security features on request 3) Read/ write (customisation) in direct chip command mode 4) UID only, read/ write (customisation) on request 5) UID + read/ write (customisation) public area 6) Hash value only 7) Only emulation of 4100, 4102 8) On request 9) Without encryption 10) UID + PAC (CSN & Facility Code), read/ write(customisation) on request 11) In preparation 13) EV2/ EV3 supported as part of the EV1 downward compatibility 14) From FW V4.05 15) 134.2 kHz only 20) PAC (CSN & Facility Code), read/ write (customisation) on request 21) UID+CAN&CSN 22) UID only, read on request | | | | | | | | | | | |

*To be released

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